

Scaled data based on original data using  
LM-79-08 Approved Method: Electrical and Photometric Measurements of Solid-State  
Lighting Products

Test Report Prepared for

Cooper Lighting Solutions

(formerly Eaton)

Brand: NEO-RAY

Report Number: P534558

Luminaire Tested: **S921DIP-W540-XX4XX-UDD-W-PC**

Issue Date: 6/9/2021

**Test Information**

Test Method: LM-79-08  
Report Number: P534558  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P35513)  
Test Lab: INNOVATION CENTER  
Issue Date: 6/9/2021  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: NEO-RAY  
Catalog Number: S921DIP-W540-XX4XX-UDD-W-PC  
Description: NEO-RAY CONVERGE SUSPENDED LED WaveStream LUMINAIRE  
WHITE CURVILINEAR HOUSING WITH PERFORATED UPLIGHT COVER  
Light Source: 4000K CCT, 80 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

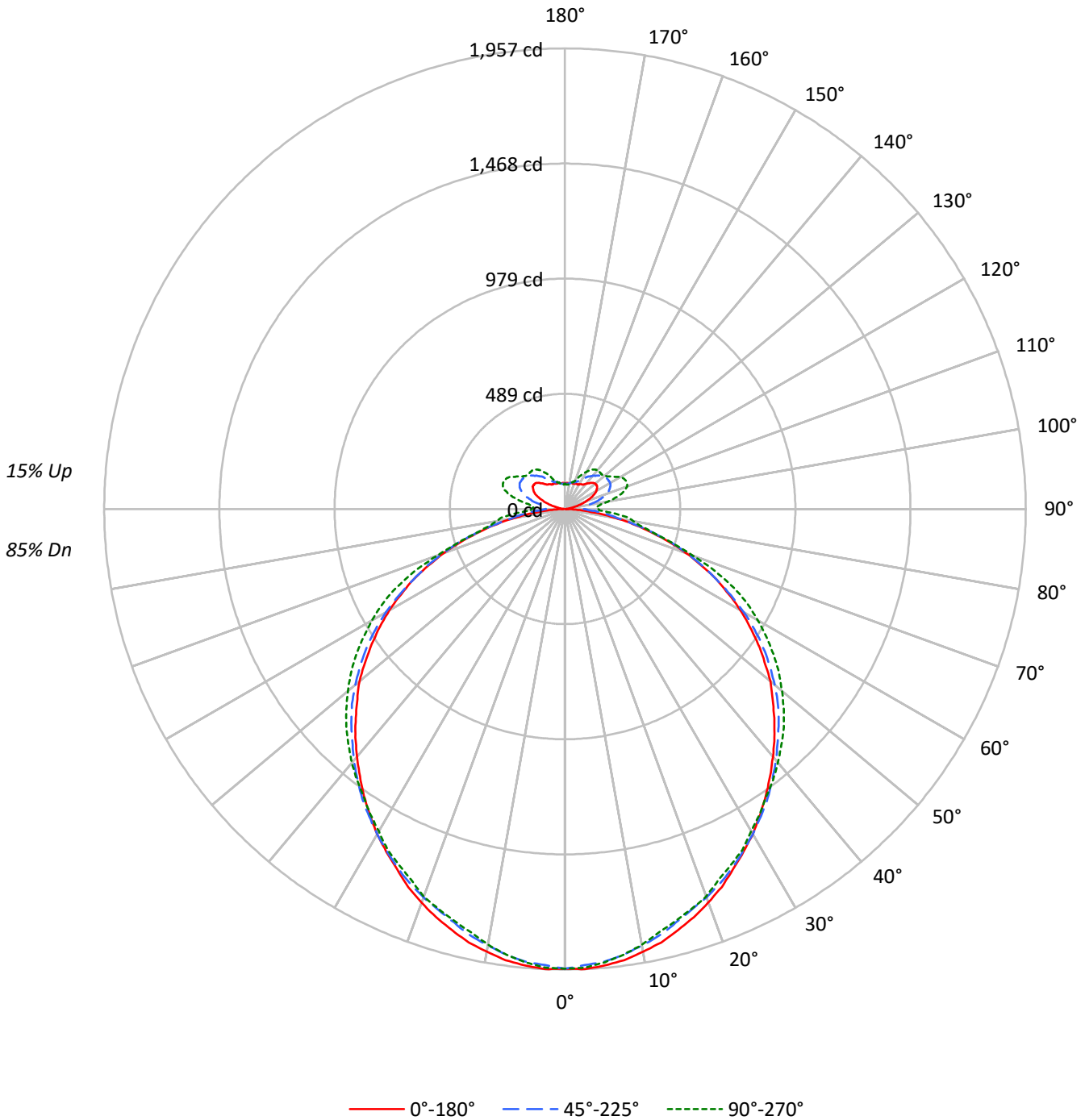
Lumens per Lamp: N/A  
Luminaire Lumens: 6642.5 lumens  
Efficiency: N/A  
Efficacy: 97.7 lumens/watt  
Spacing Criteria (0/90/45): 1.22 / 1.21 / 1.36  
Luminous Opening: Rectangular w/ Sides (W: 0.68' x L: 4' x H: 0.31')  
CIE Type: Semi-Direct

Input Watts (W): 68  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 24 FT



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### Luminous Intensity Polar Plot





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**COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:**

|     |     |     |     |     |     |     |     |     |     |     |     |    |    |    |    |    |    |    |    |    |    |   |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|----|----|----|----|----|----|----|----|----|----|---|
| RF  | 20  |     |     |     |     | 20  |     |     |     |     | 20  |    |    |    |    | 20 |    |    |    |    | 20 |   |
| RC  | 80  |     |     |     |     | 70  |     |     |     |     | 50  |    |    |    |    | 30 |    |    |    |    | 10 | 0 |
| RW  | 70  | 50  | 30  | 10  | 70  | 50  | 30  | 10  | 50  | 30  | 10  | 50 | 30 | 10 | 50 | 30 | 10 | 50 | 30 | 10 | 0  |   |
| RCR |     |     |     |     |     |     |     |     |     |     |     |    |    |    |    |    |    |    |    |    |    |   |
| 0   | 115 | 115 | 115 | 115 | 111 | 111 | 111 | 111 | 103 | 103 | 103 | 95 | 95 | 95 | 88 | 88 | 88 | 85 |    |    |    |   |
| 1   | 105 | 100 | 96  | 92  | 101 | 96  | 92  | 89  | 89  | 86  | 83  | 83 | 80 | 78 | 77 | 75 | 73 | 70 |    |    |    |   |
| 2   | 95  | 87  | 80  | 74  | 91  | 84  | 77  | 72  | 78  | 73  | 68  | 72 | 68 | 64 | 67 | 64 | 61 | 58 |    |    |    |   |
| 3   | 87  | 76  | 68  | 61  | 83  | 73  | 66  | 60  | 68  | 62  | 57  | 63 | 58 | 54 | 59 | 55 | 51 | 48 |    |    |    |   |
| 4   | 79  | 67  | 58  | 52  | 76  | 65  | 57  | 51  | 60  | 54  | 48  | 56 | 51 | 46 | 53 | 48 | 44 | 41 |    |    |    |   |
| 5   | 73  | 60  | 51  | 44  | 69  | 58  | 50  | 43  | 54  | 47  | 42  | 50 | 44 | 40 | 47 | 42 | 38 | 35 |    |    |    |   |
| 6   | 67  | 54  | 45  | 39  | 64  | 52  | 44  | 38  | 49  | 42  | 36  | 46 | 39 | 35 | 43 | 37 | 33 | 31 |    |    |    |   |
| 7   | 62  | 49  | 40  | 34  | 59  | 47  | 39  | 33  | 44  | 37  | 32  | 41 | 35 | 31 | 39 | 34 | 30 | 27 |    |    |    |   |
| 8   | 58  | 44  | 36  | 30  | 55  | 43  | 35  | 30  | 40  | 33  | 28  | 38 | 32 | 27 | 36 | 30 | 26 | 24 |    |    |    |   |
| 9   | 54  | 41  | 32  | 27  | 52  | 39  | 32  | 27  | 37  | 30  | 26  | 35 | 29 | 25 | 33 | 28 | 24 | 22 |    |    |    |   |
| 10  | 50  | 37  | 30  | 24  | 48  | 36  | 29  | 24  | 34  | 28  | 23  | 32 | 26 | 22 | 31 | 25 | 22 | 20 |    |    |    |   |

**AVERAGE LUMINANCE (cd/sqm):**

|     | 0°   | 45°  | 90°  |
|-----|------|------|------|
| 0°  | 7760 | 7760 | 7760 |
| 5°  | 7710 | 7451 | 7414 |
| 10° | 7601 | 7123 | 7019 |
| 15° | 7466 | 6797 | 6644 |
| 20° | 7316 | 6528 | 6355 |
| 25° | 7145 | 6272 | 6033 |
| 30° | 7004 | 6010 | 5745 |
| 35° | 6845 | 5761 | 5483 |
| 40° | 6691 | 5493 | 5281 |
| 45° | 6553 | 5238 | 5071 |
| 50° | 6448 | 4961 | 4820 |
| 55° | 6250 | 4634 | 4543 |
| 60° | 6035 | 4223 | 4198 |
| 65° | 5729 | 3695 | 3761 |
| 70° | 5235 | 3138 | 2975 |
| 75° | 4473 | 2460 | 2192 |
| 80° | 3414 | 1687 | 1884 |
| 85° | 1786 | 1267 | 1502 |



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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 183.6  | 2.8       |
| 10°-20°   | 516.8  | 7.8       |
| 20°-30°   | 775.9  | 11.7      |
| 30°-40°   | 937.9  | 14.1      |
| 40°-50°   | 993.9  | 15.0      |
| 50°-60°   | 926.8  | 14.0      |
| 60°-70°   | 723.6  | 10.9      |
| 70°-80°   | 408.9  | 6.2       |
| 80°-90°   | 162.7  | 2.4       |
| 90°-100°  | 95.6   | 1.4       |
| 100°-110° | 163.4  | 2.5       |
| 110°-120° | 208.1  | 3.1       |
| 120°-130° | 188.7  | 2.8       |
| 130°-140° | 146.6  | 2.2       |
| 140°-150° | 103.9  | 1.6       |
| 150°-160° | 62.6   | 0.9       |
| 160°-170° | 33.0   | 0.5       |
| 170°-180° | 10.4   | 0.2       |
| 0°-30°    | 1476.3 | 22.2      |
| 0°-40°    | 2414.1 | 36.3      |
| 0°-60°    | 4334.8 | 65.3      |
| 0°-90°    | 5630.1 | 84.8      |
| 90°-120°  | 467.2  | 7.0       |
| 90°-150°  | 906.4  | 13.6      |
| 90°-180°  | 1012.0 | 15.2      |
| 0°-180°   | 6642.5 | 100.0     |

**CANDELA DISTRIBUTION:**

|      | 0°   | 22.5° | 45°  | 67.5° | 90°  | Flux |
|------|------|-------|------|-------|------|------|
| 0°   | 1954 | 1954  | 1954 | 1954  | 1954 |      |
| 5°   | 1947 | 1947  | 1930 | 1937  | 1934 | 185  |
| 15°  | 1853 | 1850  | 1820 | 1820  | 1813 | 523  |
| 25°  | 1689 | 1692  | 1682 | 1676  | 1669 | 779  |
| 35°  | 1488 | 1505  | 1501 | 1498  | 1491 | 931  |
| 45°  | 1257 | 1280  | 1283 | 1307  | 1314 | 971  |
| 55°  | 1002 | 1019  | 1029 | 1062  | 1082 | 895  |
| 65°  | 710  | 707   | 710  | 767   | 791  | 699  |
| 75°  | 375  | 369   | 385  | 382   | 385  | 399  |
| 85°  | 74   | 97    | 147  | 184   | 204  | 90   |
| 90°  | 3    | 40    | 80   | 121   | 141  | 5    |
| 95°  | 10   | 50    | 87   | 121   | 141  | 13   |
| 105° | 60   | 104   | 151  | 214   | 248  | 64   |
| 115° | 131  | 171   | 211  | 261   | 285  | 127  |
| 125° | 168  | 188   | 221  | 231   | 241  | 147  |
| 135° | 158  | 158   | 201  | 211   | 214  | 121  |
| 145° | 127  | 134   | 168  | 194   | 204  | 81   |
| 155° | 117  | 121   | 131  | 147   | 158  | 54   |
| 165° | 114  | 114   | 117  | 117   | 117  | 32   |
| 175° | 111  | 111   | 107  | 107   | 104  | 11   |
| 180° | 107  | 107   | 107  | 107   | 107  |      |

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**CANDELA DISTRIBUTION (FULL):**

|        | 0°     | 22.5°  | 45°    | 67.5°  | 90°    |
|--------|--------|--------|--------|--------|--------|
| 0°     | 1953.6 | 1953.6 | 1953.6 | 1953.6 | 1953.6 |
| 2.5°   | 1957.0 | 1957.0 | 1940.2 | 1950.3 | 1950.3 |
| 5°     | 1946.9 | 1946.9 | 1930.2 | 1936.9 | 1933.5 |
| 7.5°   | 1933.5 | 1930.2 | 1910.1 | 1913.4 | 1910.1 |
| 10°    | 1910.1 | 1906.7 | 1883.3 | 1886.6 | 1879.9 |
| 12.5°  | 1886.6 | 1879.9 | 1856.4 | 1849.7 | 1843.0 |
| 15°    | 1853.1 | 1849.7 | 1819.6 | 1819.6 | 1812.9 |
| 17.5°  | 1819.6 | 1812.9 | 1786.1 | 1789.4 | 1782.7 |
| 20°    | 1779.4 | 1776.0 | 1755.9 | 1759.3 | 1752.6 |
| 22.5°  | 1739.2 | 1735.8 | 1722.4 | 1719.1 | 1705.7 |
| 25°    | 1688.9 | 1692.3 | 1682.2 | 1675.5 | 1668.8 |
| 27.5°  | 1642.0 | 1645.3 | 1638.6 | 1635.3 | 1631.9 |
| 30°    | 1595.1 | 1601.8 | 1595.1 | 1588.4 | 1581.7 |
| 32.5°  | 1541.5 | 1551.5 | 1548.2 | 1541.5 | 1538.1 |
| 35°    | 1487.8 | 1504.6 | 1501.2 | 1497.9 | 1491.2 |
| 37.5°  | 1430.9 | 1454.3 | 1447.6 | 1451.0 | 1451.0 |
| 40°    | 1373.9 | 1397.4 | 1394.0 | 1404.1 | 1407.4 |
| 42.5°  | 1316.9 | 1337.0 | 1337.0 | 1357.2 | 1360.5 |
| 45°    | 1256.6 | 1280.1 | 1283.4 | 1306.9 | 1313.6 |
| 47.5°  | 1196.3 | 1216.4 | 1226.5 | 1253.3 | 1260.0 |
| 50°    | 1139.3 | 1152.7 | 1162.8 | 1193.0 | 1203.0 |
| 52.5°  | 1069.0 | 1085.7 | 1095.8 | 1132.6 | 1146.0 |
| 55°    | 1001.9 | 1018.7 | 1028.8 | 1062.3 | 1082.4 |
| 57.5°  | 931.6  | 948.3  | 955.0  | 995.2  | 1015.4 |
| 60°    | 861.2  | 871.3  | 878.0  | 918.2  | 945.0  |
| 62.5°  | 784.1  | 790.8  | 794.2  | 847.8  | 874.6  |
| 65°    | 710.4  | 707.1  | 710.4  | 767.4  | 790.8  |
| 67.5°  | 626.6  | 626.6  | 633.3  | 680.3  | 690.3  |
| 70°    | 546.2  | 542.9  | 549.6  | 579.7  | 576.4  |
| 72.5°  | 462.4  | 452.4  | 472.5  | 472.5  | 472.5  |
| 75°    | 375.3  | 368.6  | 385.4  | 382.0  | 385.4  |
| 77.5°  | 294.9  | 294.9  | 298.2  | 311.6  | 325.0  |
| 80°    | 214.5  | 224.5  | 231.2  | 271.4  | 294.9  |
| 82.5°  | 137.4  | 154.1  | 187.7  | 251.3  | 268.1  |
| 85°    | 73.7   | 97.2   | 147.4  | 184.3  | 204.4  |
| 87.5°  | 26.8   | 63.7   | 97.2   | 130.7  | 147.4  |
| 90°    | 3.4    | 40.2   | 80.4   | 120.6  | 140.7  |
| 92.5°  | 3.4    | 43.6   | 80.4   | 117.3  | 134.0  |
| 95°    | 10.1   | 50.3   | 87.1   | 120.6  | 140.7  |
| 97.5°  | 20.1   | 60.3   | 93.8   | 134.0  | 157.5  |
| 100°   | 30.2   | 73.7   | 107.2  | 160.8  | 191.0  |
| 102.5° | 43.6   | 87.1   | 130.7  | 191.0  | 221.2  |
| 105°   | 60.3   | 103.9  | 150.8  | 214.5  | 248.0  |
| 107.5° | 77.1   | 124.0  | 170.9  | 234.6  | 268.1  |
| 110°   | 97.2   | 140.7  | 187.7  | 248.0  | 281.5  |

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**CANDELA DISTRIBUTION (continued):**

|        | 0°    | 22.5° | 45°   | 67.5° | 90°   |
|--------|-------|-------|-------|-------|-------|
| 112.5° | 113.9 | 157.5 | 201.1 | 254.7 | 284.8 |
| 115°   | 130.7 | 170.9 | 211.1 | 261.4 | 284.8 |
| 117.5° | 144.1 | 181.0 | 217.8 | 261.4 | 281.5 |
| 120°   | 154.1 | 187.7 | 221.2 | 254.7 | 271.4 |
| 122.5° | 160.8 | 187.7 | 221.2 | 244.6 | 254.7 |
| 125°   | 167.5 | 187.7 | 221.2 | 231.2 | 241.3 |
| 127.5° | 167.5 | 184.3 | 217.8 | 221.2 | 227.9 |
| 130°   | 167.5 | 177.6 | 211.1 | 214.5 | 217.8 |
| 132.5° | 164.2 | 167.5 | 207.8 | 211.1 | 214.5 |
| 135°   | 157.5 | 157.5 | 201.1 | 211.1 | 214.5 |
| 137.5° | 147.4 | 150.8 | 191.0 | 214.5 | 214.5 |
| 140°   | 140.7 | 144.1 | 184.3 | 211.1 | 214.5 |
| 142.5° | 130.7 | 140.7 | 174.3 | 204.4 | 211.1 |
| 145°   | 127.3 | 134.0 | 167.5 | 194.4 | 204.4 |
| 147.5° | 124.0 | 130.7 | 154.1 | 184.3 | 194.4 |
| 150°   | 120.6 | 127.3 | 140.7 | 174.3 | 181.0 |
| 152.5° | 117.3 | 124.0 | 134.0 | 164.2 | 170.9 |
| 155°   | 117.3 | 120.6 | 130.7 | 147.4 | 157.5 |
| 157.5° | 117.3 | 120.6 | 124.0 | 134.0 | 140.7 |
| 160°   | 113.9 | 117.3 | 120.6 | 127.3 | 127.3 |
| 162.5° | 113.9 | 113.9 | 120.6 | 120.6 | 120.6 |
| 165°   | 113.9 | 113.9 | 117.3 | 117.3 | 117.3 |
| 167.5° | 113.9 | 113.9 | 113.9 | 113.9 | 113.9 |
| 170°   | 110.6 | 110.6 | 110.6 | 110.6 | 110.6 |
| 172.5° | 110.6 | 110.6 | 107.2 | 107.2 | 103.9 |
| 175°   | 110.6 | 110.6 | 107.2 | 107.2 | 103.9 |
| 177.5° | 110.6 | 110.6 | 107.2 | 107.2 | 103.9 |
| 180°   | 107.2 | 107.2 | 107.2 | 107.2 | 107.2 |

(END OF REPORT)